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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/942,837 | 08/29/2001 | Shawn R. Gettemy | PALM-3651 | 8549 |

7590 09/22/2004
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| EXAMINER |
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BELL, PAUL A

| ART UNIT | PAPER NUMBER |
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2675

DATE MAILED: 09/22/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,837

Applicant(s)

GETTEMY ET AL.

Examiner

PAUL A BELL

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1, 10 and 19 have the phrase, "**capable of** functioning in a non-planar surface" wherein the inclusion of the words "capable of" make the phrase unclear and indefinite because it is not a positive clear recitation of a limitation and therefore given little weight.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1-11 and 13-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki (6,529,188).

With regard to claim 1, Suzuki teaches a display assembly for an electronic device comprising: a display device (figure 10, item 1 "LCD"), a digitizer (figure 10, item 4 "touch panel") comprising a layer of **flexible** conductive paste (figure 5, items 12 and 11 "ITO", column 10, lines 47-52 and now two references are now merely cited as evidence to an "inherent physical properties of the material ITO used" such as "conductive paste" SEE: Gettemy et al. Patent Publication US 2002/0180620 A1 (dated Dec 5, 2002) which is # 09/871,322 (filed May 30, 2001) section [0005] where it states "The conductive films 922, 924 are formed of Indium Tin Oxide material, which has a paste constituency." and further such as "flexible" SEE Gettemy et al. patent application # 09/942,837 page 4 line 21 "ITO has some flexibility"), disposed above a digitizing element, **said flexible conductive paste capable of functioning in a non-planar surface** (figure 1A item 11 is non-planar and item 12 appears planar but it is also "capable" of being non-planar); and a single-piece top cover enclosing said **electronic** device and said digitizer and operable to allow mechanical transfer of external pressure to cause said layer of conductive paste to contact and activate said digitizing element *responsive to said external pressure, wherein a point of contact on said single-piece top cover is detected* (figures 1a and 1b item 4A does illustrate one single-piece top cover and column 10, lines 48-52) .

With regard to claim 2 Suzuki teaches the display assembly of Claim 1, wherein said single-piece top cover comprises a flexible thermoplastic outer film having a three-dimensional top surface (figure 1a, item 4A, column 10, lines 46-52 "PET" film).

With regard to claim 3 Suzuki teaches the display assembly of Claim 2, wherein said single-piece top cover further comprises a supporting structure that is coupled to said transparent flexible thermoplastic outer film (figure 1A, item 4B).

With regard to claim 4 Suzuki teaches the display assembly of Claim 1, wherein said single-piece top cover is free of any steps, openings, or indentations (figure 1a item 4A does illustrate this).

With regard to claim 5 Suzuki teaches the display assembly of Claim 1, wherein said digitizer further comprises a plurality of electrodes and traces operable to register a point of contact when said conductive paste makes contact with said digitizing element (figure 1A, items 11 and 12).

With regard to claim 6 Suzuki the display assembly of Claim 1, wherein said single-piece top cover further comprises a decorative border constructed therein using an in mold decoration process (figure 11a shows a display region item 15 and input region of touch panel item 20 these edges under item 4 will visually create a border that is considered to read on the subjective feature "decorative")

With regard to claim 7 Suzuki teaches the display assembly of Claim 1, wherein a decorative border is disposed directly beneath said single-piece top cover and above said digitizer (figure 11a).

With regard to claim 8 Suzuki teaches the display assembly of Claim 7, wherein said digitizer comprises electrical traces and circuits along a periphery that are hidden by said decorative border (figure 11a and figure 5).

With regard to claim 9 Suzuki teaches the display assembly of Claim 1, wherein said single-piece top cover has indentations to indicate button functions (column 15, lines 17-21 and figure 12).

With regard to claim 10, Suzuki teaches a display for an electronic device comprising: a display mechanism (figures 8-10), a single-piece cover that is bezel-less **which encloses said electronic device** and is disposed over a top surface of said display mechanism and operable to allow mechanical transfer of pressure (figures 1a and 1b item 4A does illustrate one single-piece top cover and column 10, lines 48-52), and a resistive digitizer mechanism disposed beneath said cover *comprising a layer of flexible conductive paste* (figure 5, items 4A and 11 "ITO", column 10, lines 47-52 and two references are now merely cited as evidence to an "inherent physical property of the material ITO used" such as "conductive paste" SEE: Gettemy et al. Patent Publication US 2002/0180620 A1 (dated Dec 5, 2002) which is # 09/871,322 (filed May 30, 2001) section [0005] where it states "The conductive films 922, 924 are formed of Indium Tin Oxide material, which has a paste constituency." and further such as "flexible" SEE Gettemy et al. patent application # 09/942,837 page 4 line 21 "ITO has some flexibility") **capable of functioning in a non-planar surface**, *disposed above a digitizing element* (figure 1A item 11 is non-planar and item 12 appears planar but it is also "capable" of being non-planar) and responsive to said mechanical transfer of said cover, operable for registering *contact between said layer of flexible conductive paste and said digitizing element corresponding to a contact point on said cover* (figures 1a and 1b).

With regard to claim 11, Suzuki teaches the display assembly of Claim 10, further comprising a supporting structure and wherein said single-piece cover is a transparent flexible thermoplastic outer film having a three-dimensional top surface coupled to said supporting structure (figure 1a, item 4A, column 10, lines 46-52).

With regard to claim 13, Suzuki teaches the display assembly of Claim 12, wherein said single-piece cover has sufficient deflection under external pressure to cause said layer of flexible conductive paste to contact and activate said resistive digitizer mechanism (figure 1A, items 11 and 12).

With regard to claim 14, Suzuki teaches the display assembly of Claim 10, wherein said single-piece cover is free of any steps, openings, or indentations (figure 1a).

With regard to claim 15, Suzuki teaches the display assembly of Claim 10, wherein said single-piece cover further comprises a decorative border constructed therein using an in mold decoration process (figure 11a shows a display region item 15 and input region of touch panel item 20 these edges under item 4 will visually create a border that is considered to read on the subjective feature "decorative").

With regard to claim 16, Suzuki teaches the display assembly of Claim 10, wherein a decorative border is disposed directly beneath said single-piece cover and above said resistive digitizer mechanism (figure 11A).

With regard to claim 17, Suzuki teaches the display assembly of Claim 16, wherein said resistive digitizer mechanism comprises electrical traces and circuits along a periphery that are hidden by said decorative border (figure 11a and figure 5).

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With regard to claim 18, Suzuki teaches the display assembly of Claim 10, wherein said single-piece cover has indentations to indicate button functions (column 15, lines 17-21 and figure 12).

With regard to claim 19, Suzuki teaches a display assembly for an electronic device comprising: a display mechanism (figures 8-10); a back cover (figure 11c, item 19); a transparent single-piece cover having a bezel-less and three dimensional top surface **which encloses said electronic device** disposed over a top surface of said display mechanism (figures 1a and 1b item 4A does illustrate one single-piece top cover and column 10, lines 48-52); and a resistive digitizer mechanism disposed beneath said transparent single-piece cover *comprising a layer of flexible conductive paste* (figure 5, items 4A and 11 "ITO", column 10, lines 47-52 and now two references is now merely cited as evidence to an "inherent physical properties of the material ITO used" such as "conductive paste" SEE: Gettemy et al. Patent Publication US 2002/0180620 A1 (dated Dec 5, 2002) which is # 09/871,322 (filed May 30, 2001) section [0005] where it states "The conductive films 922, 924 are formed of Indium Tin Oxide material, which has a paste constituency." and further such as "flexible" SEE Gettemy et al. patent application # 09/942,837 page 4 line 21 "ITO has some flexibility") **capable of functioning in a non-planar surface**, *disposed above a digitizer element* (figure 1A item 11 is non-planar and item 12 appears planar but it is also "capable" of being non-planar) and operable for registering a contact point on said transparent single-piece cover *corresponding to a point of contact between said layer of flexible conductive paste and said digitizing element* (figures 1a and 1b).

With regard to claim 20 teaches the display assembly of Claim 19, wherein said transparent single-piece cover further comprises a transparent flexible thermoplastic outer film free of any steps, openings, or indentations and coupled to a supporting structure (figure 1a).

With regard to claim 21 Suzuki teaches the display assembly of Claim 19, wherein said transparent single-piece cover has sufficient deflection under external pressure to activate said resistive digitizer mechanism (figure 1a items 560 and 4a this is an inherent feature needed for device to work).

With regard to claim 22 Suzuki teaches the display assembly of Claim 19, wherein said transparent single-piece cover further comprises a decorative border constructed using an in mold decoration process (figure 11a shows a display region item 15 and input region of touch panel item 20 these edges under item 4 will visually create a border that is considered to read on the subjective feature "decorative").

With regard to claim 23 Suzuki teaches the display assembly of Claim 19, wherein a decorative border is disposed directly beneath said transparent single-piece cover and above said resistive digitizer mechanism (figure 11A).

With regard to claim 24 Suzuki teaches the display assembly of Claim 23, wherein said resistive digitizer mechanism comprises electrical traces and circuits along a periphery that are hidden by said decorative border (figure 11a and figure 5).

With regards to claim 25 Suzuki teaches the display assembly of Claim 19, wherein said transparent single-piece cover has indentations to indicate button functions (column 15, lines 17-21 and figure 12).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (6,529,188) as applied to claims 1-25 above and further in view of Conroy et al.(5,686,705).

With regard to claims 26-28 Suzuki does not directly teach the display assembly of Claim 1, 10 and 19 wherein said layer of flexible conductive paste comprises a conductive polymer. Suzuki instead uses ITO paste.

However Conroy et al. does teach a touch panel that uses a layer of flexible conductive paste comprises a conductive polymer (SEE Conroy et al. column 3, lines 9-30, column 4, lines 21-32, column 5, lines 55-67, column 6, lines 1-10 and especially column 8, lines 37-40) .

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Suzuki apparatus to use the conductive polymer taught by Conroy et al. because the Conroy et al. material is more flexible and will hold up better over time.

The prior art made of record and not relied upon is considered very pertinent to applicant's disclosure.

Welsh et al. (6,469,267) SEE figures 7 and 8 (very good illustration) and column 2, lines 14-40 examiner suggest you read this reference and talk about it and your next action in relation to your newly amended independent claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Applicants arguments with regard to independent claims 1, 10 and 19 in regards to the new amendments adding features which address physical properties of materials which examiner considers inherent based on broad and indefinite amendments made with further regard examiner references the rejection above.

Applicant's arguments with regards to 2-9, 11-, 13-18, 20-25 amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The examiner references the more detail rejection above with regard to these arguments.

With regard to applicants arguments of new claims 26-28 a new reference was brought and examiner references the rejection above.

Conclusion

8. The prior art made of record and not relied upon is considered very pertinent to applicant's disclosure.

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Welsh et al. (6,469,267) SEE figures 7 and 8 (very good illustration) and column 2, lines 14-40 examiner suggest you read this reference and talk about it and your next response in relation to your newly amended independent claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019.

If attempts to reach the examiner by telephone are unsuccessful the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377 can help with any inquiry of a general nature or relating to the status of this application.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or Faxed to: (703) 872-9306

Or Hand-delivered to: Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor
(Receptionist).

Paul Bell

Paul Bell

Art unit 2675

September 11, 2004

Chanh Nguyen
CHANH NGUYEN
PRIMARY EXAMINER